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Two newly recorded species of the family Gnaphosidae (Araneae) from Japan

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Abstract — Two gnaphosid species, *Heser infumatus* (O. Pickard-Cambridge 1872) and *Hongkongia reptrix* Deeleman-Reinhold 2001, are reported as new records from Japan. The genera *Heser* Tuneva 2004 and *Hongkongia* Song & Zhu 1998 are recorded from Japan for the first time. *Heser infumatus* is distinguished from the other Japanese species of the subfamily Zelotinae by the epigyne with a pair of transvers furrows (copulatory openings) in median part. *Hongkongia reptrix* is separated from the other Japanese gnaphosids by having the posterior eyes closely situated to one another, the posterior eye row distinctly procurved, and the long spinnerets.

Key words — *Heser infumatus, Hongkongia reptrix,* Osaka Pref., Okinawa Pref., taxonomy

Introduction

Up to the present, 21 genera and 65 species of the family Gnaphosidae have been recorded from Japan (Tanikawa 2018, Ono & Ogata 2018). In this paper, I report two gnaphosid species, *Heser infumatus* (O. Pickard-Cambridge 1872) and *Hongkongia reptrix* Deeleman-Reinhold 2001, from Japan for the first time. The specimen of the former species was collected from Osaka Prefecture, and that of the latter was taken from Okinawa Prefecture. The genera *Heser* Tuneva 2004 and *Hongkongia* Song & Zhu 1998 are newly recorded from Japan.

The abbreviations used in this paper are as follows: ALE, anterior lateral eye; AME, anterior median eye; MOA, median ocular area; p, proventral; PLE, posterior lateral eye; PME, posterior median eye; r, retroventral. Eye size means length of long axis of an eye, but measurement of posterior median eye was made at horizontal level. All measurements are given in mm.

Taxonomy

Heser infumatus (O. Pickard-Cambridge 1872)
[Japanese name: Mugiwara-kemurigumo]
(Fig. 1A–E)

Drassus infumatus O. Pickard-Cambridge 1872: 238, pl. 15, fig. 16.
Zelotes infumatus: Levy 1998: 145, figs. 112–115; FitzPatrick 2007: 124, figs. 97–100.
Heser infumatus: Tuneva 2004: 323.
For other references, see World Spider Catalog (2018).

Specimen examined. 1♀, Edobori, Nishi-ku, Osaka-shi, Osaka Pref., Japan, 10.VII.1975, K. Katsura leg.

Description (one female from Osaka Pref.). Measurements. Body length 7.04. Carapace length 3.24, width 2.32. Abdomen length 3.80, width 2.24. Eye sizes: AME 0.12, ALE 0.13, PME 0.12, PLE 0.13. Distances between eyes: AME-AME 0.06, AME-ALE 0.01, PME-PME 0.06, PME-PLE 0.10, ALE-PLE 0.07. MOA anterior width 0.28, posterior width 0.30, length 0.35. Clypeus height 0.10. Lengths of legs as in Table 1.

Ventral spines on legs I and II. Tibiae: I and II 0-0-0, metatarsi: I 0-0-0, II 2-1p-2.

Anterior eye row slightly recurved, and posterior eye row slightly procurved (Fig. 1A). Thoracic groove longitudinal, distinct (Fig. 1B). Chelicera with four teeth on promargin of fang furrow, and two teeth on retromargin (Fig. 1C). Trochanters of legs without ventral notch. Metatarsi III and IV with preening comb on ventro-distal end. Leg formula 4-1-2-3 (Table 1).

Epigyne with anterior hood recurved and slightly protruding posteriorly, and with a pair of copulatory openings observed as transvers furrows (Fig. 1D). Internal genitalia with a pair of short lobes situated dorsally to copulatory openings (Fig. 1E).

Color. Cephalothorax and appendages yellowish brown, but chelicerae, labium, tarsi of palps, and metatarsi and tarsi of legs somewhat darker. Abdomen pale grayish brown. Spinnerets pale yellowish brown.

Distribution. Tanzania, Egypt and Israel (World Spider Catalog 2018), and Greece (Senglet 2012).

Remarks. The present specimen from Japan was collected more than 40 years ago and is the only record of this species in East Asia. Judging from this situation, Japan might not be included in the natural range of this species and this specimen might be artificially carried into Japan by chance.

Table 1. Lengths of legs of *Heser infumatus* (O. Pickard-Cambridge 1872) (female from Osaka Pref.).

Leg	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	2.35	1.63	1.93	1.65	1.13	8.69
II	1.96	1.30	1.51	1.41	0.98	7.16
III	1.75	1.05	1.18	1.50	0.85	6.33
IV	2.49	1.40	2.00	2.50	1.05	9.44

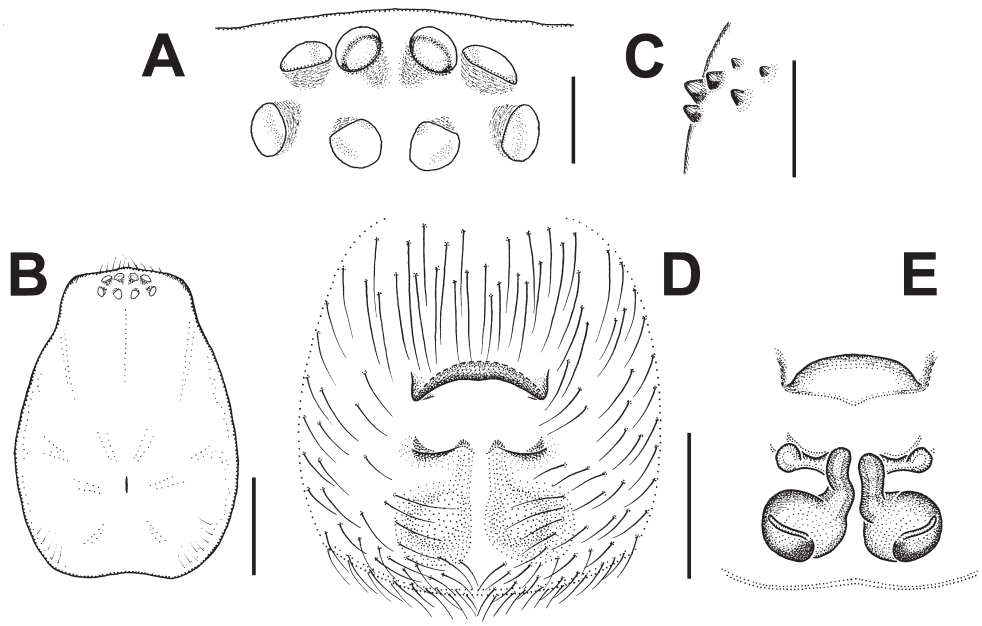

Fig. 1. *Heser infumatus* (O. Pickard-Cambridge 1872), female. A, eye area, dorsal view; B, carapace, dorsal view; C, teeth of left chelicera, posterior view; D, epigyne, ventral view; E, internal genitalia, dorsal view. Scales: 0.2 mm (A, C–E); 1.0 mm (B).

The genus *Heser* is a member of the subfamily Zelotinae, which is characterized by having a preening comb on ventro-distal end of metatasi III and IV. *Heser infumatus* is easily distinguished from the other Japanese species of this subfamily by the presence of a pair of transvers furrows in median part of epigyne.

Hongkongia reptrix Deeleman-Reinhold 2001
[Japanese name: Nagaibo-washigumo]
(Fig. 2A–G)

Hongkongia reptrix Deeleman-Reinhold 2001: 520, figs. 881–885; Murphy 2007: figs. 356–357.

Specimen examined. 1♂, Komi, Iriomotejima Is., Okinawa Pref., Japan, 18.III.2015, T. Yamamoto leg.

Description (one male from Okinawa Pref.). Measurements. Body length 4.58. Carapace length 1.94, width 1.40. Abdomen length 2.64, width 1.40. Eye sizes: AME 0.12, ALE 0.11, PME 0.12, PLE 0.11. Distances between eyes: AME-AME 0.06, AME-ALE 0.01, PME-PME 0.05, PME-PLE 0.03, ALE-PLE 0.02. MOA anterior width 0.28, posterior width 0.29, length 0.31. Clypeus height 0.11. Lengths of legs as in Table 2.

Ventral spines on legs I and II. Tibiae: I 0-0-0, II 1r-1r-1p, metatarsi: I & II 2-0-0.

Anterior eye row straight, posterior eye row distinctly procurved, and posterior eyes separated from each other by less than a half of the eye size (Fig. 2A). Thoracic groove longitudinal, distinct (Fig. 2B). Chelicera with large three teeth on promargin of fang furrow, small one or two teeth on retromargin; and with two setae minutely plumose, arising from anterior and posterior sides near base of fang (Fig. 2C–D). Trochanters of legs without ventral notch. Metatarsi III and IV with dense setae on ventro-distal end. Leg formula 1-4-2-3 (Table 2). Spinnerets relatively long (Fig. 2B; cf. Kamura 2009, figs. 2-2-58-22, 159, 163, etc.).

Palp with conductor sclerotized, distally situated, forming

Table 2. Lengths of legs of *Hongkongia reptrix* Deeleman-Reinhold 2001 (male from Okinawa Pref.).

Leg	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	1.78	1.18	1.40	1.30	1.00	6.66
II	1.42	0.86	1.00	1.02	0.82	5.12
III	1.24	0.68	0.80	1.00	0.68	4.40
IV	1.70	0.88	1.22	1.51	0.86	6.17

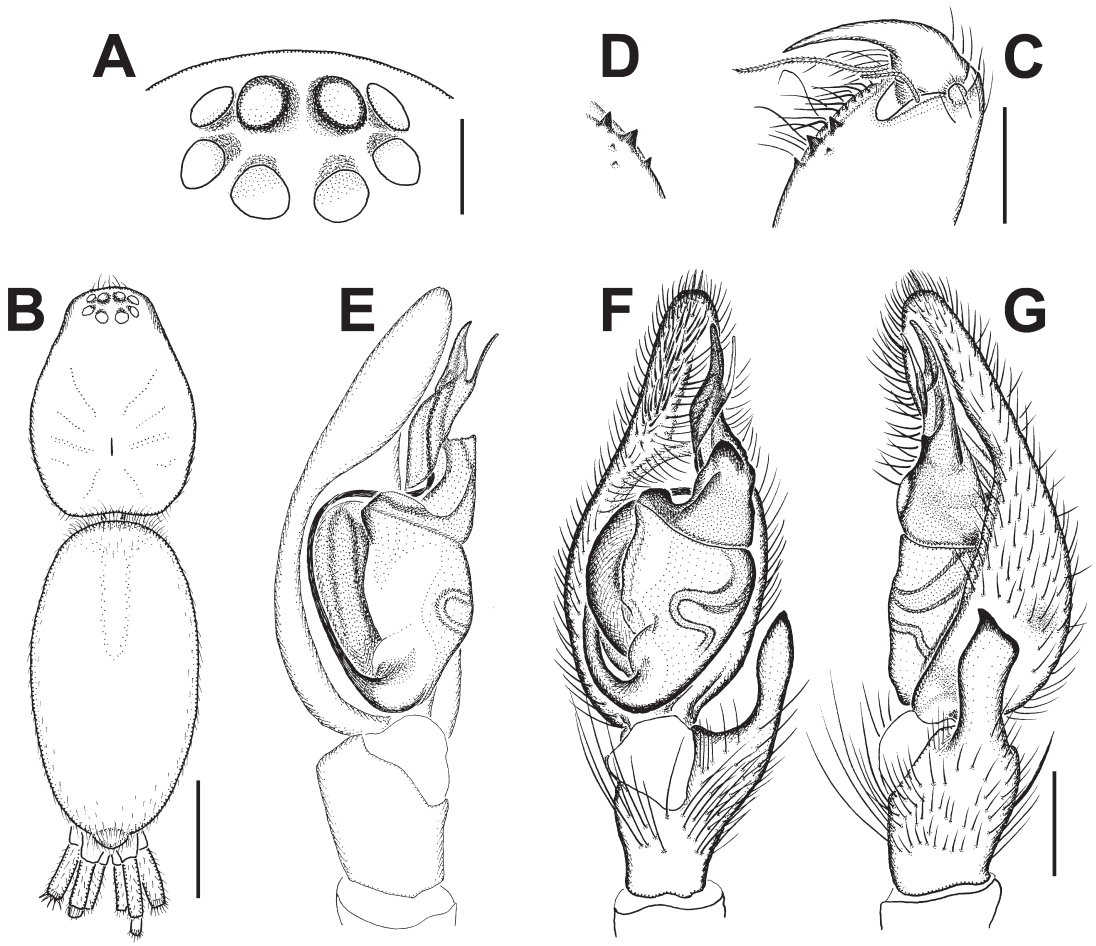

Fig. 2. *Hongkongia reptrix* Deeleman-Reinhold 2001, male. A, eye area, dorsal view; B, carapace and abdomen, dorsal view; C, left chelicera, posterior view; D, teeth of right chelicera, posterior view; E, left palp, prolateral view; F, same, ventral view; G, same, retrolateral view. Scales: 0.2 mm (A, C–G); 1.0 mm (B).

complex structure having a longitudinal socket; embolus long, arising from proximal part of bulb and its tip inserted into the socket formed by conductor; retrolateral tibial apophysis long and pointed apically; and without median apophysis (Fig. 2E–G).

Color. Cephalothorax and appendages light brownish yellow, but chelicerae darker. Abdomen yellowish gray. Spinnerets yellowish white.

Distribution. Indonesia (Borneo, Sumatra, Java, Bali) (Deeleman-Reinhold 2001, Murphy 2007), Japan.

Remarks. *Hongkongia reptrix* is distinguished from the other Japanese gnaphosids by having the posterior eyes closely situated to one another, the posterior eye row distinctly procurved, and the long spinnerets.

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References

Deeleman-Reinhold, C. L. 2001. Forest Spiders of South East Asia. Brill, Leiden, 591 pp.

FitzPatrick, M. J. 2007. A taxonomic revision of the Afrotropical species of *Zelotes* (Arachnida: Araneae: Gnaphosidae). Bull. Br. Arachnol. Soc., 14: 97–172.

Kamura, T. 2009. Gnaphosidae. Pp. 483–499. In: Ono, H. (ed.) The Spiders of Japan: with keys to the families and genera and illustrations of the species. Tokai Univ. Press, Kanagawa, xvi + 738 pp. (In Japanese)

Levy, G. 1998. The ground-spider genera *Setaphis*, *Trachyzelotes*, *Zelotes*, and *Drassyllus* (Araneae: Gnaphosidae) in Israel. Israel J. Zool., 44: 93–158.

Murphy, J. 2007. Gnaphosid Genera of the World. British Arachnol. Soc., St Neots, Cambs. Vol. 1, pp. i–xii, 1–92; Vol. 2, pp. i–ii, 93–605.

Ono, H. & Ogata, K. 2018. Spiders of Japan: Their Natural History and Diversity. Tokai Univ. Press, Kanagawa, xiii + 713 pp. (In Japanese)

Pickard-Cambridge, O. 1872. General list of the spiders of Palestine and Syria, with descriptions of numerous new species, and characters of two new genera. Proc. Zool. Soc. London, 1872: 212–354, pls. XIII–XVI.

Senglet, A. 2012. *Civizelotes* new genus, and other new or little known Zelotinae (Araneae, Gnaphosidae). Rev. Suisse Zool., 119: 501–528.

Song, D. X. & Zhu, M. S. 1998. A new genus and two new species of Hong Kong spiders (Gnaphosidae, Corinnidae). J. Hebei Normal Univ., Nat. Sci., 22: 104–108.

Tanikawa, A. 2018. A check list of Japanese spiders, ver. 2018R4. http://www.asahi-net.or.jp/~dp7a-tnkw/japan.pdf (In Japanese)

Tuneva, T. K. 2004. A contribution on the gnaphosid spider fauna (Araneae: Gnaphosidae) of east Kazakhstan. Pp. 319–332. In: Logunov, D. V. & Penney, D. (eds.) European Arachnology 2003 (Proceedings of the 21st European Colloquium of Arachnology, St. Petersburg, 4–9 August 2003). Arthropoda Selecta, Spec. Issue 1. KMK Sci. Press, Moscow, 374 pp.

World Spider Catalog 2018. World Spider Catalog. Version 19.5. Natural History Museum Bern, online at http://wsc.nmbe.ch, accessed on October 3, 2018. doi: 10.24436/2

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